



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,723	06/20/2005	Michaela Hoehne	65084.000013	5109

21967 7590 09/03/2008

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

EXAMINER

PAGE, BRENT T

ART UNIT	PAPER NUMBER
----------	--------------

1638

MAIL DATE	DELIVERY MODE
-----------	---------------

09/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,723	HOEHNE ET AL.	
	Examiner	Art Unit	
	BRENT PAGE	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/18/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 5-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 and 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-9,14-16 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Reply filed by Applicant on 12/18/2007 is acknowledged. The cancellation of claims 1, 4 and 21 without prejudice is also hereby acknowledged.

Election/Restrictions

Applicant's election with traverse of SEQ ID NO:3 in the reply filed on 12/18/2007 is acknowledged. The traversal is on the ground(s) that per telephonic phone conversation that the reduction of all three genes is the instant invention. This is not found persuasive because it was understood from the telephonic conversation that the constructs contained all three genes, however, the amendment of the claims encompass a multitude of possible combinations rather than the embodiment discussed telephonically. The use of "and/or" language allows for a multitude of combinations that are first of all different inventions and second of all present the search burden that necessitated the supplemental restriction requirement to begin with. Accordingly, only SEQ ID NO:3 has been searched for a construct.

The requirement is still deemed proper and is therefore made FINAL.

Claims 2-3, and 5-20 are pending with claims 10-13 and claims 17-19 remaining withdrawn as drawn to non-elected subject matter. Claims 1, 4-9, 14-16 and 20 are examined on the merits below as they apply the election of SEQ ID NO:3.

Objections and rejections of record in the office action mailed out 03/22/2007 not specifically addressed below are considered hereby withdrawn in response to Applicants arguments when taken together with the claim amendments.

Specification

The disclosure is objected to because it contains 2 embedded hyperlinks and/or other form of browser-executable code in paragraphs 35 and 38 of the specification. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Objections

Claims 2-3, 5-9, 14-16 and 20 are objected to because of the following informalities: The claims recite non-elected subject matter. Appropriate correction is required.

Claim Rejections - 35 USC § 112

New Matter

Claims 2-3, 5-9, 14-16 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 2, 5 and 9 all recite "gene encoding a binding domain of a SSIII protein comprising at least 95% identity with the amino acid sequence of SEQ ID NO:3; (2) a BEI protein comprising at least 95% identity to the amino acid of SEQ ID NO: 5; and (3) a BEII protein comprising at least 95% identity with the amino acid sequence of SEQ ID NO:7". The specification does not contain any mention of sequences with 95% identity to particular SEQ ID NOs. The closest language in the specification is on page 23

Art Unit: 1638

where 95% "homology" is discussed over the full length of the genes, but no mention of identity nor any mention of "particular SEQ ID NOs is mentioned in the specification.

Additionally, the specification on page 13 discusses starch synthases with 90% identity to SEQ ID NO:3, but not 95% and no mention of the other SEQ ID NOs, although it is understood that they are drawn to non-elected subject matter and thus, not examined.

Accordingly, the claims are drawn to New Matter. The New Matter must be removed from the claims.

Claim Rejections - 35 USC § 112

Enablement

Claims 2-3, 5-9, 14-16 and 20 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the use of SEQ ID NO:2 in antisense orientation for the reduction of SSIII, does not reasonably provide enablement for sequences encoding amino acids with only 95% identity to SEQ ID NO:3 for the reduction of SSIII. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The claims remain rejected for the reasons of record as well as the reasons set forth below.

Applicant's arguments filed 12/18/2007 have been fully considered but they are not persuasive.

Applicants urge that the claim amendments place the claims in condition for allowance.

Art Unit: 1638

This is not persuasive because the claims still encompass embodiments that have not been shown to be functional in the instant specification. Applicants have used specific constructs in the instant invention to achieve a specific phenotype. Degenerate sequences that simply encode the protein of interest would not necessarily work as antisense molecules especially depending the length of such a sequence but also considering many antisense sequences utilize intron sequences which would not enable any sequence that merely encodes an enzyme to actually work as an antisense molecule. Likewise, molecules used in cosuppression would need to be sufficiently similar to actually cosuppress the gene of interest, and it is not sufficient to simply encode the protein, nor encode a protein that has only 95% identity to such a protein. It is suggested that Applicants amend the claims to reflect more accurately their invention.

Claim Rejections - 35 USC § 112

Written Description

Claims 2-3, 5-9, 14-16 and 20 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims remain rejected for the reasons of record as well as the reasons set forth below.

Applicant's arguments filed 12/18/2007 have been fully considered but they are not persuasive.

Applicants urge that the claim amendments place the claims in condition for allowance.

This is not persuasive because Applicants have not adequately described the sequences that are crucial for the function of reducing the expression outside of the working examples that would show possession of the full scope of the claims. Applicants have not shown which sequences are absolutely required for antisense and cosuppression effects so as to sufficiently describe the full scope of the claims. Additionally, Applicants lack description of the claimed embodiments as discussed in the New Matter rejection as discussed above.

Claim Rejections - 35 USC § 112-2nd paragraph

Claims 3, 6-8, 14 and 16 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "plant cells" according to claim 2. There is insufficient antecedent basis for this limitation in the claim. The claims needs to recite --the--- plant cell according to Claim 2 for proper antecedent basis.

Claims 8 and 16 recites the limitation "plants" according to claim 3 and claim 15 respectively. The claims need to recite ---the--- plant for proper antecedent basis.

Applicant's arguments filed 12/18/2007 have been fully considered but they are not persuasive.

Applicants urge that the claim amendments place the claims in condition for allowance.

Art Unit: 1638

This is not persuasive because claims 3, 8 and 16 have not been amended to correct the antecedent basis pointed out in the previous office action.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-3, 5-9, 14-16 and 20 remain rejected under 35 U.S.C. 102(b) as being anticipated by Edwards et al (WO9966050).

The claims remain rejected for the reasons of record as well as the reasons set forth below.

Applicant's arguments filed 12/18/2007 have been fully considered but they are not persuasive.

Applicants urge that the claim amendments place the claims in condition for allowance.

This is not persuasive because the election of SEQ ID NO:3 renders the claims anticipated by Edwards et al. As stated in the office action mailed out 3/22/2007, Edwards et al disclose the starch synthase III gene of potato, anti-sense constructs to said gene which comprise sequence with 100% identity to SEQ ID NO:3, potato plants, plant cells and propagation materials therefrom with modified starch content.

The rejection of claims 2-3, 5-6, 8-9, 14-16 and 20 under 35 USC 102(b) as being anticipated by Broglie et al is hereby withdrawn upon the election of SEQ ID NO:3.

No claims are free of the prior art.

No claims are allowed.

Art Unit: 1638

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT PAGE whose telephone number is (571)272-5914. The examiner can normally be reached on Monday-Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571)-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1638

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phuong T. Bui/
Primary Examiner, Art Unit 1638

Brent T Page